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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/713,789

11/14/2003

Alastair James Buchanan

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08/14/2006

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EXAMINER

MANCHO, RONNIE M

ART UNIT

PAPER NUMBER

3663

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/713,789 | Applicant(s) BUCHANAN ET AL. | |
| | Examiner Ronnie Mancho | Art Unit 3663 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the applicant recites “a **target vehicle** detection means located on the host vehicle which is adapted to identify the position of **any target objects** located on the road ahead of the host vehicle, the position including data representing the distance of the **target vehicle** from the host vehicle”. The highlighted phrases are not in agreement. That is the applicant recites, ““a **target vehicle** detection means”. It is therefore understood that the claimed “detection means” detect “target vehicle. On the other hand, the applicant further recites “.....adapted to identify the position of **any target objects**”. The claimed “target vehicle” is not in agreement with the claimed “**any target objects**”. Therefor, one skilled in the art will not be able to ascertain the metes and bounds of the claims.

Claims 2-19 are rejected~~d~~ for depending on rejected claim 1.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Sawamoto et al (EP 0890470 A2).

Regarding claim 1, Sawamoto et al (abstract) disclose a target object sensing apparatus for a host vehicle, the apparatus comprising:

a lane detection apparatus provided on the host vehicle which includes an image acquisition means adapted to capture an image of at least a part of the road ahead of the host vehicle (col. 6, lines 10 et. seq., line 33);

a vehicle path estimation means adapted to estimate a projected path for the host vehicle (e.g. col. 7, lines.28 to 54, abstract);

a target vehicle detection means located on the host vehicle which is adapted to identify the position of any target objects located on the road ahead of the host vehicle (Figs. 3&4), the position including data representing the distance of the target vehicle from the host vehicle (col. 5, lines 50-54);

first data processing means adapted to predict a target lane (abstract, fig. 3 and 4) in which the host vehicle will be located when it has traveled along the projected path by the distance to the target object (col. 9, lines 14-44 et. seq., fig. 7);

second processing means adapted to compare the position of the target vehicle determined by the target detection means with the position of the target lane to provide a processed estimate of the actual position of the target object (col.7, lines 38 et seq., col. 9 lines 43 et seq.) .

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Note! From fig. 7 in combination with the corresponding part of the description on page 9, line 44 etc, it is clear for the person skilled in the art, that the calculation means of the prior art are able to predict the position of the host vehicle in a future path (in particular lines 51 etc). This implies that also the position of the host vehicle can be estimated, when it has traveled by the distance to the target object.

In the prior art, the positions of all participants (host and target vehicles) are plotted in a absolute system of coordinates (col. 7 and col. 9) in order to be able to compare distances of objects on real and estimated paths.

Regarding claims 2-23, the prior art also anticipates the limitations therein. These claims suggest only slight constructional changes in the device of claim 1 which comes within the scope of one of high skill in the art.

MPEP 2114

5. The statement of intended use or field of use, "adapted to", "ifindicates that", etc clauses are essentially method limitation or statement of intended or desired use. Thus, the claim as well as other statements of intended use do not serve to patentably distinguish the claimed structure over that of the reference. See *In re Pearson*, 181 USPQ 641; *In re Yanush*, 177 USPQ 705; *In re Finsterwalder*, 168 USPQ 530; *In re Casey*, 512 USPQ 235; *In re Otto*, 136 USPQ 458; *Ex parte Masham*, 2 USPQ 2nd 1647. See MPEP § 2114 which states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art

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apparatus” if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ 2nd 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than functions. In re Danly, 120 USPQ 528, 531.

Apparatus claims cover what a device is not what a device does. Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP § 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

Response to Arguments

6. Applicants’ arguments filed 3/9/06 have been fully considered, but are not persuasive.

The applicants argue that the prior art, Sawamoto does not disclose first data processing means and second data processing means as recited in the claim. Particularly that the prior art does not disclose, “first data processing means adapted to determine a target lane in which the host vehicle will be located when it has traveled along the projected path by the distance to the target object”. The applicant further insists that the prior art determines the distance to the target vehicle from the host vehicle, but does not use this determination to determine a target lane. In response, the examiner disagrees. First, Sawamoto (abstract, col. 7, lines 29-54) determines a future path to be traveled by a host vehicle. Sawamoto also determines the distance from the host vehicle to a target vehicle using a detection apparatus, wherein the target vehicle is in front of the host vehicle. Sawamoto further disclose a processor for predicting a future path or target lane K2 base on distance to the target vehicle K1 (col. 9, lines 16-41).

It is further noted that Sawamoto continuously determines or predicts the path or lane of the host vehicle and also computes or determines a distance between the host vehicle and target vehicle. After the host vehicle travels past that particular distance to the target vehicle, the host vehicle continues to determine and predict the path of the host vehicle. Therefore, Sawamoto anticipates the claims.

Next, the applicants argue that Sawamoto does not predict which lane the host vehicle will be in. The examiner strongly disagrees. Sawamoto (abstract, col. 7, lines 29-54) predicts the lane or path of the host vehicle. In other words, Sawamoto plots a future path of the host vehicle. The applicants on page numbered 8 in their remarks are in contradiction by stating that Sawamoto estimates a future path of a host vehicle and then denying in a previous page that Sawamoto does not estimate a future path of a host vehicle. Applicants' arguments drawn to Sawamoto using a yaw sensor makes no sense since the applicant also use a yaw sensor in their invention.

Communication

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 571-272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.

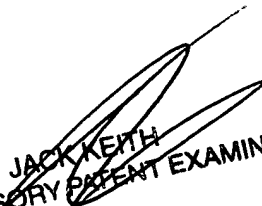
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ronnie Mancho
Examiner
Art Unit 3663

August 8, 2006


JACK KEITH
SUPERVISORY PATENT EXAMINER